

## CLAIMS

What is claimed is:

1. A method for implementing an index-linked insurance product having a term, an annual guarantee and a maximized hedged investment budget comprising:

allocating at least a portion of a premium payment to a fixed income investment and projecting an annual fixed income yielded for the fixed income investment;

determining a maximized hedged investment budget by deducting from the projected annual fixed income yield a product spread and an estimated cost of the annual guarantee, the deducted estimated cost of the annual guarantee being allocated to a risk fund;

allocating the maximized hedged investment budget to a hedged investment linked to an index in order to generate proceeds for supporting an amount credited to the index-linked insurance product based on index-linked earnings; and

upon expiration of the term, early surrender or death, if the amount credited based on the index-linked earnings is not equal to at least the annual guarantee compounded over the term, using funds from the risk fund and other reserves if necessary in order to increase the amount credited to be equal to the compounded annual guarantee.

2. The method of claim 1, wherein the estimated cost of the annual guarantee comprises an estimate of the funds that are likely to be required to in order to increase the amount credited to be equal to the compounded annual guarantee.

3. The method of claim 1, wherein the estimated cost of the annual guarantee is determined through a historical analysis comprising a back-casting of a historical performance rate of the index over an analysis period to determine a cost of the annual guarantee during a plurality of hypothetical terms of the index-linked insurance product.

4. The method of claim 1, wherein the index-linked insurance product further has one or more features comprising an annual minimum growth rate, an annual capped growth rate, and/or a participation rate; and

wherein the estimated cost of the annual guarantee comprises an estimate of the funds that are likely to be required in order to increase the amount credited to be equal to the compounded annual guarantee, taking into account the features of the index-linked insurance product.

5. The method of claim 4, wherein one or more of the features of the index-linked insurance product may optionally be reset each year during the term.
6. The method of claim 1, wherein the term is greater than one year.
7. The method of claim 1, wherein the hedged investment comprises an at-the-money hedge.
8. The method of claim 1, the index-linked insurance product further comprises an annual capped growth rate; and  
wherein the hedged investment comprises a purchase of a plurality of at-the-money call options and a sale of a plurality of call options having a strike price that is out-of-the-money by an amount equal to the annual capped growth rate.
9. The method of claim 8, wherein the annual capped growth rate may optionally be reset each year during the term.
10. The method of claim 1, wherein the hedged investment is designed to yield the greater of the annual guarantee or a percentage gain attributable to the index, limited by any features of the segment.
11. The method of claim 1, wherein the risk fund comprises funds deducted from multiple insurance products.
12. A computer-readable medium having stored thereon computer executable instructions for performing the method of claim 1.

13. A system for implementing an index-linked insurance product having a term, an annual guarantee and a maximized hedged investment budget comprising:

an input device for inputting data to identify the term, the annual guarantee, and an estimated cost of the annual guarantee; and

a processor functionally coupled to the input device for receiving the data and thereafter executing computer-executable instructions for:

monitoring index-linked earnings to be credited to the index-linked insurance product based on performance rate of an index,

crediting an amount to the index-linked insurance product based on the index-linked earnings, the index-linked earnings being supported by proceeds generated by a hedged investment made using the maximized hedged investment budget, which is determined by allocating at least a portion of a premium payment to a fixed income investment and projecting an annual fixed income yield of the fixed income investment, and deducting from the projected annual fixed income yield a product spread and the estimated cost of the annual guarantee, the deducted estimated cost of the annual guarantee being allocated to a risk fund,

determining a guaranteed value of the index-linked insurance product based on the annual guarantee, and

upon expiration of the term, early surrender or death, if the amount credited based on the index-linked earnings does not equal to at least the guaranteed value, using funds in the risk fund and other reserves if necessary in order to increase the amount credited to be equal to the guaranteed value.

14. The system of claim 13, wherein the estimated cost of the annual guarantee comprises an estimate of the funds that are likely to be required to increase the amount credited to be equal to the guaranteed value.

15. The system of claim 13, wherein the estimated cost of the annual guarantee is determined through a historical analysis comprising a back-casting of a historical performance rate of the index over an analysis period to determine a cost of the annual guarantee during a plurality of hypothetical terms of the index-linked insurance product.

16. The system of claim 13, wherein the index-linked insurance product further has one or more of the features comprising an annual minimum growth rate, an annual capped growth rate, and a participation rate; and

wherein the estimated cost of the annual guarantee comprises estimate of the funds that are likely to be required to increase the amount credited to be equal to the guaranteed value, taking into account the features of the index-linked insurance product.

17. The system of claim 16, wherein one or more of the features of the index-linked insurance product may optionally be reset each year during the term.

18. The system of claim 13, wherein the term is greater than one year.

19. The system of claim 13, wherein the hedged investment comprises an at-the-money hedge.

20. The system of claim 13, wherein the index-linked insurance product further has an annual capped growth rate; and

wherein the hedged investment comprises a purchase of a plurality of at-the-money call options and a sale of a plurality of call options having a strike price that is out-of-the-money by an amount equal to the annual capped growth rate.

21. The system of claim 20, wherein the annual capped growth rate may optionally be reset each year during the term.

22. The system of claim 13, wherein the hedged investment is designed to yield the greater of the annual guarantee or a percentage gain attributable to the index, limited by any features of the segment.

23. The system of claim 13, wherein the risk fund comprises funds deducted from multiple insurance products.

24. A method for implementing an index-linked insurance product comprising:

- determining an investment budget by projecting a fixed income yield to be produced by investing a net premium payment in a fixed income investment;
- determining a hedged investment budget by deducting from the investment budget a product spread and an estimated cost of an annual guarantee associated with the index-linked insurance product, the deducted estimated cost of an annual guarantee being allocated to a risk fund;
- creating a segment of the index-linked insurance product having a term;
- allocating the hedged investment budget to a hedged investment designed to generate proceeds for supporting index-linked earnings to be credited to the index-linked insurance product;
- determining an initial index value;
- at the end of each one year period for the duration of the term:
  - determining an anniversary index value,
  - determining a current segment value by crediting to the segment an amount based on the index-linked earnings comprising a percentage difference between the anniversary index value and the initial index value, and
  - realizing any proceeds generated by the hedged investment; and
- upon expiration of the term, early surrender or death, if the amount credited to the segment based on the index-linked earnings does not equal to at least the annual guarantee compounded over the term, using funds from the risk fund and other reserves if necessary in order to increase the amount credited to the segment to be equal to the compounded annual guarantee.

25. The method of claim 24, wherein the segment includes one or more features comprising an annual minimum growth rate and an annual capped growth rate; and

wherein determining a current segment value comprises crediting to the segment the amount based on the index-linked earnings comprising the greater of the annual minimum growth rate or the percentage difference between the anniversary index value and the initial index value limited by the annual capped growth rate.

26. The method claim 24, further comprising at the end of each one year period for the duration of the term, optionally resetting one or more of the features of the segment.

27. The method of claim 24, wherein the segment further has a participation rate; and

wherein determining the current segment value comprises crediting to the segment the amount based on the index-linked earnings comprising the greater of the annual minimum growth rate or the percentage difference between the anniversary index value and the initial index value times the participation rate limited by the annual capped growth rate.

28. The method of claim 24, wherein the estimated cost of the annual guarantee comprises an estimate of the funds that are likely to be required in order to increase the amount credited to the segment to be equal to the compounded annual guarantee.

29. The method of claim 24, wherein the estimated cost of the annual guarantee is determined by a historical analysis comprising a back-casting of a historical performance rate of the index over an analysis period to determine a cost of the annual guarantee during a plurality of hypothetical terms of the segment.

30. The method of claim 24, wherein the term is greater than one year.

31. The method of claim 24, wherein the hedged investment comprises an at-the-money hedge.

32. The method of claim 24, wherein the hedged investment comprises a purchase of a plurality of at-the-money call options and a sale of a plurality of call options having a strike price that is out-of-the-money by an amount equal to the annual capped growth rate.

33. The method of claim 24, wherein the hedged investment is designed to yield the greater of the annual guarantee or the percentage difference between the anniversary index value at expiration of the term and the initial index value, limited by any features of the segment.

34. A computer-readable medium having stored thereon computer executable instructions for performing the method of claim 24.